Thompson's Bridge
Spanning the Brandywine River
on Delaware State Route 92,
1.6 miles north of the intersection
of Routes 92 and 100
Wilmington vicinity
New Castle County
Delaware

HABS No. DE-25

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUIDING SURVEY
MID-ATLANTIC REGION, NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

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HISTORIC AMERICAN ENGINEERING RECORD

THOMPSON'S BRIDGE HAER NO. DE-25

Location: Spanning the Brandywine River on Delaware State Route 92, 1.6 miles north of the intersection of Routes 92 and 100, in New Castle County, Delaware. Located in the Wilmington vicinity, New Castle County, Delaware

UTM 18.451250.4407250
Quad: Wilmington North

Date of Construction: September 1934 - April 1935

Present Owner: Delaware Department of Transportation
Route 113
Dover, DE 19903

Present Use: Vehicular and Pedestrian Bridge

Significance: Thompson's Bridge is a multiple span, highly ornamental example of a concrete encased steel girder bridge; this type commonly was constructed by the State Highway Department during the period 1925-1935. This period was characterized by the consolidation and improvement of the primary road system, and the development of the secondary road system throughout Delaware by the State Highway Department.

Project Information: This documentation was undertaken in February, 1990 in accordance with the Memorandum of Agreement by the Federal Highway Administration as a mitigative measure prior to the demolition of the bridge.

Diane Bernardo
Project Engineer
Location & Environmental Studies
Delaware Dept. of Transportation
Dover, DE

Thompson's Bridge is the site of one of the Brandywine River's oldest crossings. In 1850, a covered bridge was built by the New Castle County Levy Court. The covered bridge served Brandywine Hundred* and Christiana Hundred until 1934. Modern vehicles, the increase in traffic, and time caused the decay of the wooden structure. Newspaper articles of the day indicate that the covered bridge had broken through several times.

On July 31, 1934, the New Castle County Levy Court adopted resolutions apportioning costs of a new bridge. New Castle County received $24,401.10 from the sale of bonds. Half of the money was apportioned to the Brandywine Hundred road account and the other half to the road account of the third district of Christiana Hundred.

On August 21, 1934, the New Castle County Levy Court opened bids for construction services. Six bids were received for demolition of the old covered bridge and construction of the new Thompson's Bridge. The lowest bid came from Edward Taylor of Coatesville, PA in the amount of $47,530.40. It is not referenced where the funds originated to cover the extra cost of construction. One can speculate that the Brandywine & Christiana Hundred accounts had some excess to complete the job.

Demolition of the covered bridge began in September, 1934. The new bridge was opened to traffic on April 30, 1935.

During the 1925-1935 time period, the Delaware State Highway Department was developing a secondary road system and consolidating its primary road system. By 1934, Thompson's Bridge was an established secondary route for commerce and commuters. The people who lived in the area were farmers and wealthy businessmen who travelled into the city of Wilmington. It was important that the original covered bridge be replaced by a bridge that would not take long to construct due to local traffic demands. The steel girder bridge was an economical and expedient engineering solution to the problem at hand.

By the time of the construction of Thompson's Bridge, simple steel girder spans were fully developed technologically. The steel girder design chosen for Thompson's Bridge does not represent a milestone in the development of bridge design. However, it is

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* Hundreds was a unit of English local government between a village and a shire, or county dating back to King Edmund I (939-946) that continued to be used in Great Britain into the 1800's. Theories differ as to the origin of 'hundred'. One is that it was an area with enough people to provide 100 men for battle in wartime. Delaware is the only state that currently uses the Hundreds system.

unusual in its use of a continuous span rather than a simple span design. Nonetheless, the bridge drew no attention from engineering periodicals of the day. The history of Thompson's Bridge is largely limited to those facts that can be gleaned from the original engineering drawings.

The bridge features considerable architectural elaboration including a concrete parapet with battered "skyscraper style" end and intermediate posts spanned by a balustrade with triangular-headed openings. The fascia of each span is treated as a segmental arch. The architectural treatment is important when viewed in the context of the bridge's setting. The area in 1934, and as it is in 1990, is rural in character. From the bridge, one can view forested areas on all sides. Architecturally, Thompson's Bridge is similar to two other bridges in the Brandywine River Valley. Both the Rockland Road Bridge, built in 1933, and the Husbands Run Bridge, built in 1932, have the same "skyscraper style" treatment.

The bridge was designed by Charles B. Dannenberg, bridge engineer of the staff of County Engineer Alban P. Shaw. The bridge comprises three 61 ft. concrete encased steel girder continuous spans for an overall length of 189 ft. The deck consists of two 11'-7½" travel lanes and a 4'-5" sidewalk. The total width of the deck including curbs and offsets is 32'-2". The bridge is designed to accommodate H20 loadings which is for trucks as heavy as 20 tons. During construction, a temporary foot bridge was provided for use by pedestrians.

The superstructure consists of a reinforced concrete slab (7" thickness), and a 2" hot mix driving surface. The slab is supported by 7 rolled steel I-beams spaced at 5'-0" intervals. "I-beam" means the cross section of the steel is shaped like the capital letter 'I'. The I-beams are encased in concrete to protect the steel beam from corrosion.

The substructure has concrete abutments (4'-0" thick 28'-0" high) at ends, and 2 intermediate concrete piers (5'-0" thick x 24'-6" high). The abutments are high, thus eliminating the use of piles. The abutments and piers have a spread footing foundation. The footing is bearing on a rock surface.

Thompson's Bridge has remained the same in 1990 as when constructed in 1934. Only minor repairs to the road surface have occurred since its construction.

HISTORIC AMERICAN ENGINEERING RECORD

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LOCATION MAP

THOMPSON'S BRIDGE

NEW CASTLE COUNTY, DELAWARE